APPLICATION FOR A BIOSOLIDS USE PERMIT

For Department Use Only
Commonwealth of Virginia
Department of Environmental Quality
DEQ Regional Office:_____

Identification No. _____
Date Received: _____

Type of System or Works: _X_ NEW __ UPGRADE ___ MODIFICATIONS

Owner:

Name: .Synagro Central, LLC

Street or Mailing Address: 10647 Tidewater Trail

City: Champlain State: Virginia Zip Code: 22438

Phone No.:(804) 443-2170
Area Code

Authorized Representative:

Name: D. Steve McMahon

Street or Mailing Address: Same as above

City : _____ State: _____ Zip Code: _____

Phone No: (_____) _____
Area Code

Consulting Engineer:

Name of Firm : Same as Owner

Project Engineering:

_____

Street or Mailing

Address: _____

Phone No.: (_____) _____
Area Code

RECEIVED PRO
AUG 28 2014

Project Description:

Permit No.: _____.

__. INTERIM ___. FINAL

DATE ISSUED: _____ EXPIRATION DATE: _____.

__. System __. Works Biosolids Source(s) : See attached list

Location of Operations:

City: _____ Counties: Goochland.

(Attach Listing of Sites if Applicable)

Total Acreage involved: 307.9.

Total annual amount of biosolids from each source: See attached list.

Process Description including supernatant management: See attached list

Type of treatment for pathogen control for each source (if applicable) : See attached list

Process Description including supernatent management: See attached list

Treatment Certification:

Owner(s) of Biosolids Source/Treatment Works:

Phone# _____

Street or Mailing Address: _____

City _____ State _____ Zip Code _____

X . Yes __. No A statement indicating that a proper class of biosolids treatment will be provided for this project has bee issued by the owner(s) of the Biosolids Source/Treatment Works and is attached (Biosolids Use Regulation).
Analysis and certification will be provided in monthly or annual reports.

D. Stuart McMahon

(Name, Title and Signature of Official Representative of Applicant)

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM A
ALL APPLICANTS

1. Facility	The land application and recycling of biosolids to agricultural and silvicultural land
	Synagro Central, LLC - Goochland County
2. Owner	Synagro Central, LLC
	10647 Tidewater Trail, Champlain, VA 22438-2017
	804-443-2170
	smcmahon@synagro.com
3. Owner Contact	D. Steve McMahon
	Technical Services Manager
	10647 Tidewater Trail, Champlain, VA 22438-2017
	804-443-2170
	smcmahon@synagro.com

4. Existing permits (e.g., VPA, VPDES; VWP, RCRA; UIC); other:

Agency	Permit Type	Permit Number
VDH	BUR	96

5. Nature of Business:

SIC Code(s): 0711, 4953

6. Type of Waste:

(check box as appropriate)	Proposed	Existing
Animal Waste (complete Form B)	☐	☐
Industrial Waste (complete Form C)	☐	☐
Land Application of Municipal Effluent (complete Form D, Part I)	☐	☐
Land Application of Biosolids/Sewage Sludge (complete Form D, Part II)	X	☐
Reclamation and/or Distribution of Reclaimed Wastewater (Application Addendum)	☐	☐

7. General Location Map:

Provide a general location map which clearly identifies the location of the facility

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM A
ALL APPLICANTS

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. I further certify that I am an authorized signatory as specified in the VPA Permit Regulation (9VAC25-32).

Signature:	D. Steve McMahon	Date: 8/28/14
Printed Name:	D. Steve McMahon	
Title:	Technical Services Manager	

Rev. 4-2009

ATTACHMENT A

SYNAGRO CENTRAL, LLC

GOOCHLAND COUNTY LAND APPLICATION SITES

DEQ Control #	Site #	Field #	Gross Acres	Net Acres	Landowner	Mod #	Tax Map ID	Latitude	Longitude
	GO 30	1	44.5	42.2	Derenda & Richard Reynolds		54-1-0-14-0	37°38'43.02"	77°50'53.39"
	GO 30	2	38.9	38.9	Derenda & Richard Reynolds		54-1-0-14-0	37°38'34.46"	77°50'26.34"
	GO 30	3	20.9	20.4	Derenda & Richard Reynolds		54-1-0-9-0	37°38'41.67"	77°50'22.45"
	GO 30	4	24.0	24.0	Derenda & Richard Reynolds		54-1-0-9-0	37°38'53.40"	77°50'19.80"
	GO 30	5	20.7	20.5	Derenda & Richard Reynolds		54-1-0-9-0	37°38'59.72"	77°50'38.72"
	GO 30	6	112.7	109.7	Ray Reynolds Trustees		54-1-0-8-00	37°39'12.10"	77°50'23.76"
	GO 30	7	16.7	15.8	Ray Reynolds Trustees		54-1-0-8-0	37°39'07.88"	77°50'05.22"
	GO 30	8	29.5	27.4	Ray Reynolds Trustees		54-1-0-8-0, 54-1-0-10-0	37°39'00.46"	77°50'22.85"
		TOTAL	307.9						
GRAND TOTAL			307.9						

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-II LAND APPLICATION OF BIOSOLIDS

All of the information provided in this application will become part of the Biosolids Management Plan associated with a VPA individual permit issued for the proposed activity.

General Information

1. Owner Legal name. (Should be the same name given on Form A, Item 2).

   Synagro Central, LLC.

2. Provide a general description of the proposed operation.
   a. Provide a list of the generators of biosolids that you currently handle, and each source of biosolids produced at the generating facility proposed for land application. This list shall include only sources that are identified as approved on the DEQ Sources list. (A source of biosolids at the generating facility is the product of a specific series of treatment unit processes, and a single facility may have multiple sources. For example, a generator that splits its waste activated sludge, half to a digester and a belt press and the other half to lime stabilization has 2 sources of biosolids) Include the following information:
      1) Legal name as it is identified on the DEQ Sources List and VPDES, NPDES or other state permit number of the generating facility;
      2) Source of biosolids as identified by "Treatment Type" on the DEQ Sources List;
      3) Provide the generating facility's odor control plan for sources identified as approved on the DEQ Sources List, but for which an odor control plan has not been submitted. The odor control plan shall contain at minimum:
         a) Methods used to minimize odor in producing biosolids;
         b) Methods used to identify malodorous biosolids before delivery to the land applier (at the generating facility);
         c) Methods used to identify and abate malodorous biosolids if delivered to the field, prior to land application; and
         d) Methods used to abate malodor from biosolids if land applied;
   b. General location of sites proposed for application, and
   c. Methods of biosolids application proposed.

      All information listed above regarding the generators has been provided to Charlie Swanson in the Central Office for approval. We have included Attachment C which lists each generator, their Permit Number, location and treatment type.

3. Provide a legible copy of any leasing agreements necessary for the operation of any treatment or storage facilities not under direct ownership of the applicant, which identifies the involved parties. ***NA***

4. Identify the methods for notification of DEQ and local government prior to proposed land application activities.

   An email will be sent out within 24 hours of material being brought into the state listing

the permit number, site number, field number, route number and source(s) that will be spread.

5. Provide to the DEQ and to each locality in which the biosolids are to be applied, written evidence of financial responsibility. Evidence of financial responsibility shall be provided in accordance with the requirements specified under 9VAC25-32-770 et seq. ***This requirement has been satisfied with DEQ – Central Office for all Synagro VPA permit activities in Virginia.***

Design Information

Biosolids Characterization

6. Provide a separate biosolids characterization form, Part D-IV, for each source of biosolids that is not identified as approved on the VA DEQ Approved Biosolids Source List. If a source is identified as pending, contact DEQ Office of Land Application to determine what additional information is required. The following biosolids sources will always require a characterization form:
   a) biosolids from a new generating facility,
   b) biosolids from an existing generator that has never been land applied in Virginia,
   c) biosolids from an existing generator that has not been land applied in Virginia within the past 5 years and has not submitted biosolids monitoring data in the last 5 years,
   d) biosolids produced by a new treatment process within an existing facility.

   N/A

7. Provide a Non-Hazardous Declaration Statement for each biosolids, Part D-V.

   N/A

Biosolids Storage

8. Describe the current status of the available biosolids storage. List in a tabular format the **routine** biosolids storage facilities and **on-site** storage by location, total storage capacity, and the biosolids contracts currently permitted or assigned to these facilities or sites.

Permitted Routine Storage & "On-site" Storage Facililties Capacities:

	Wet Tons	***Cu. Yards***
AM 04-0000	***3,500***	***4,154***
AM 08-0000	***7,000***	***8,309***
AM 13-0000-A	***3,000***	***3,561***
AM 13-0000-B	***5,000***	***5,935***
DN 01-0000	***1,517***	***1,801***
DN 10-0000	***4,000***	***4,748***
KQ 38-0000	***7,583***	***9,001***
KQ 48-0000	***4,000***	***4,748***
Fauquier Lgn (Routine S.)	***18,000***	***21,365***
Cedarville Lgn. (Routine S)	***38,000***	***45,104***
	91,600	***108,726***

9. Provide plans and specifications for **routine** and **on-site** storage of all biosolids to be handled that depict the following information: ***N/A***

   a. Site layout on a recent 7.5 minute topographic quadrangle or other appropriate scaled map with the following information:

      (1) Location of any required soil, geologic and hydrologic test holes or borings

      (2) Location of the following field features within 0.25 miles of the site boundary (indicated on the map) with the approximate distances from the site boundary.

         (a) Water wells (operating or abandoned).

         (b) Surface waters.

         (c) Springs.

         (d) Public water supplies.

         (e) Sinkholes.

         (f) Underground and/or surface mines.

         (g) Mine pool (or other) surface water discharge points.

         (h) Mining spoil piles and mine dumps.

         (i) Quarries.

         (j) Sand and gravel pits.

         (k) Gas and oil wells.

         (l) Diversion ditches.

         (m) Occupied dwellings, including industrial and commercial establishments.

         (n) Landfills - dumps.

         (o) Other unlined impoundments.

         (p) Septic tanks and drainfields.

         (q) Injection wells.

   b. Topographic map (10-foot contour preferred) of sufficient detail to clearly show the following information:

      (1) Maximum and minimum percent slopes.

      (2) Depressions on the site that may collect water.

      (3) Drainage ways that may attribute to rainfall run-on to or runoff from this site.

      (4) Portions of the site (if any) which are located within the 100-year floodplain.

   c. Data and specifications for the liner proposed for seepage control.

   d. Scaled plan view and cross-sectional view of the storage facilities or sites showing inside and outside slopes of all embankments and details of all appurtenances.

   e. Calculations justifying impoundment capacity, including freeboard where applicable.

   f. A description of supernatant handling and disposal.

   g. Groundwater monitoring plans for the facilities or sites including pertinent hydrogeological data to justify upgradient and downgradient well location and depth.

10. For the routine storage of biosolids, provide evidence of certification by the local government of the locality in which the biosolids are to be stored that the storage site is consistent with all applicable ordinances. Evidence of certification shall consist of the following:

a. A copy of the certification from the local government confirming that the storage site is consistent with all applicable ordinances, or where the local government fails to respond within 30 days of receiving the request for certification, a copy of the letter from the applicant to the local government requesting certification of the storage facility; **or**

b. A copy of the special exception or special use permit from the local government that has adopted an ordinance in accordance with § 62.1-44.19:3.R of the Code of Virginia.

N/A

Biosolids Transport

11. Provide a detailed description for each of the following:

a. Vehicles that will be used to transport biosolids from generators or storage to land application sites;

Liquid:

Sealed truck units - the number will vary depending on travel time to land application sites.

Cake:

Five-to-thirty tractor/dump trailer units - the number will vary depending on travel time to land application sites.

b. Routes to be used to transport biosolids from the generator(s) to storage unit(s);

N/A

c. Procedures for biosolids off-loading at the biosolids facilities and the land application site together with spill prevention, cleanup (including vehicle cleaning) and emergency spill notification and cleanup measures; and

Liquid Biosolids

Biosolids will be transported from the wastewater treatment facility in totally enclosed watertight units to approved land application sites. The transport trucks will deliver the biosolids to high-flotation land application vehicles stationed on the field receiving biosolids. The biosolids transfer will be through a suction hose and the land application vehicle will perform all biosolids distribution.

Dewatered Biosolids Handled with Cake Applicator Equipment

Biosolids with 15% solids and greater will be transported from the wastewater treatment facility to approved land application sites in partially enclosed dump trailers. The tailgates will be properly sealed to prevent leakage. Open areas on the trailer will be tarped.

After the biosolids are off-loaded at the application site, they will be loaded into cake spreaders with a front-end loader and then distributed on the field from the spreader.

Acceptable locations for biosolids unloading (or staging areas) are determined case-by-case by the project/field manager or his designee. Consideration is given to the following factors: proximity to adjoining property owners, elevation to avoid low spots, lack of slope, distance the application vehicle must travel to apply the biosolids, and availability of truck access. In all cases, staging areas are selected so as to maintain required buffer distances. Biosolids are unloaded in staging areas to allow coverage of the field from one field border and proceeding to the opposite border so as to prevent "painting oneself into a corner." This method allows total coverage of the fields such that the unloading vehicles will not drive through areas where biosolids have been applied.

In the event of a spill, Synagro will take the following action immediately:

1. *HALT SOURCE of spill. Use of any leaking or damaged unit which is causing the spill will cease immediately. The unit will be repaired before resuming its use.*

2. *CONTAIN SPILL. In the event large quantities of biosolids have been spilled, straw bales will be used where available to either form a barrier or soak up biosolids.*

3. *CLEAN-UP. Depending on the type and amount of biosolids spilled, a variety of equipment may be used to remove the biosolids: vacuum equipment of the biosolids applicator, front-end loader, shovels and brooms. Any biosolids removed from the spill site will be taken to an approved land application site and spread or deposited in a sanitary landfill. Prior to deposition in a sanitary landfill, approval must be obtained from the Division of Solid and Hazardous Waste Management.*

4. *FINAL CLEAN-UP. Roadways will be flushed with water as necessary to clean. Final clean-up should be completed immediately to the satisfaction of the owner.*

5. *MANAGEMENT of CLEAN-UP EFFORTS. The project/field manager shall take immediate charge and initiate clean-up activities. Synagro's labor shall be used with additional labor secured as needed. The project/field manager shall also communicate with the*

public on the scene, answering questions and advising of clean-up activities.

6. ***REPORTING. The project/field manager shall notify Synagro's main office immediately of any biosolids spills. He shall relay all relevant information regarding the spill, including how it occurred and remedial action taken. All spills will be reported as soon as possible by telephone to the Piedmont DEQ office. A written report of the incident will follow.***

7. ***SPILL PREVENTION. Truck drivers shall take the following steps:***

   a. ***Wash off any biosolids deposited on the outside of the truck during the biosolids loading process prior to leaving the wastewater treatment plant.***

   b. ***Ensure tank hatches are closed and latched or ensure trailer hatches and end gates are closed and latched prior to leaving the wastewater treatment plant.***

   c. ***Inspect tank hatches monthly and replace as necessary or inspect integrity of tailgate seals periodically and replace as necessary.***

   Project/Field Manager shall take the following steps:

   a. ***Check trucks arriving at the field to determine if they have been washed off prior to leaving the wastewater treatment plant.***

   b. ***Check to see that trucks arriving at the field have tank hatches, trailer hatches, and trailer end gates that are closed and latched.***

   c. ***Check trucks arriving at the field for any leakage from tank hatches, trailer hatches and trailer end gates. Contact truck dispatcher to ensure that any leaking or damaged units are not reloaded until the truck has been repaired.***

d. Voucher system to be used to document transport and delivery of biosolids from their source to the land application site or a facility to further process the biosolids for marketing. Also describe record retention for vouchers.

Land application activities are monitored through the use of tickets, a Daily Summary Report, and a Weekly Report combination on projects where volume or weight tickets are used. A Truck Report, Daily Summary Report and Weekly Report combination are used on projects where volume and weight tickets are not used. These reports, along with the biosolids analysis results, and site-specific NMPs provide the data used for the preparation of monthly reports. Weight tickets and Daily Truck reports are retained for 3-years.

Field Operations

12. For field operations involving storage, provide a detailed description for each of the following:

    a. Routine storage—procedures for biosolids loading of transport vehicles, equipment cleaning, freeboard maintenance for storage of liquid biosolids, and inspections for structural integrity of the storage unit;

    No Routine Storage is being proposed in this permit application.

    b.. On-site storage—procedures for DEQ approval and implementation; designated site locations if provided in the "Design Information"; the specific site criteria including the best management practices that will be utilized to prevent contact with storm water run on or runoff and the procedures to be followed to ensure the 45 day time limit will be met;

    On-site storage is the short term storage of biosolids on a constructed surface within a site approved for land application at a location preapproved by the department. On-site storage maps including the design information and size will be sent to DEQ-Piedmont Regional Office for pre-approval. These stored biosolids shall be applied only to sites under the operational control of the same owner or operator of the site where the on-site storage is located. Requirements for on-site storage including the following:

    1. ***The certified land applier shall notify DEQ – Piedmont Regional Office within the same working day whenever it is necessary to implement on-site storage. Notification shall include the source or sources, location and amounts.***
    2. ***A surface shall be constructed with sufficient strength to support operational equipment and with a maximum permeability of 10^{-7} cm/sec.***
    3. ***Storage shall be limited to the amount of biosolids specified in the nutrient management plan to be applied at sites under the operational control of the same owner or operator of the site where the on-site storage is located.***
    4. ***If malodors related to the stored biosolids are verified by DEQ at any occupied dwelling on surrounding property, the problem must be corrected within 48 hours. If the problem is not corrected within 48 hours, the biosolids must be removed from the storage site.***

5. ***All biosolids stored on the on-site storage pad shall be land applied by the 45th day from the first day of on-site storage.***
6. ***Biosolids storage shall be located to provide minimum visibility from adjacent properties.***
7. ***Best management practices shall be utilized as appropriate to prevent contact with storm water runoff.***
8. ***Stored biosolids are to be inspected by the certified land applier at least every seven days and after precipitation events of 0.1 inches or greater to ensure that runoff controls are in good working order. Observed excessive slumping, erosion, or movement of biosolids is to be corrected within 24 hours. Any ponding or malodor at the storage site is to be corrected. The certified land applier shall maintain documentation of inspections of stored biosolids.***
9. ***The department may prohibit or require additional restrictions for on-site storage in areas of Karst topography and environmentally sensitive sites.***
10. ***Storage of biosolids shall be managed so as to prevent adverse impacts to water quality or public health.***

Currently, there are no specific on-site storage locations being proposed in this permit application, but may be in the near future. Synagro will submit specific requests at later date.

c. Staging - procedures for DEQ notification; procedures to be followed including either designated site locations provided in the "Design Information" or the specific site criteria for such locations including the liner or cover requirements and the time limit assigned for such use;

Biosolids will be staged on permitted land within the application area in preparation for commencing land application or during an ongoing application at the field or adjacent field. Staging is not considered storage and shall not take its place. There will be no staging on Karst Topography, frequently flooded areas or on areas that have on site storage. If staged biosolids cannot be spread in 7 days, biosolids shall be covered. Synagro will notice DEQ - Piedmont Regional Office in writing within 24 hours. The biosolids must be spread as soon as possible. Staging is limited to the amount required for the field as per the NMP. Biosolids shall not be staged within 200 feet of a property line (can be reduced in writing), 400 feet of an occupied dwelling (can be reduced in writing) or in the buffer areas. Staged biosolids are to be inspected by a certified land applicator daily and managed to prevent adverse impacts to water quality.

d. Procedures for reestablishment of off-loading and staging areas.

Synagro will re-establish off-loading area with seeding of the existing crop when necessary and crop damage is significant. Seeding will be done at the appropriate time where establishment will likely

occur. In most cases, the farmer will be consulted as to the appropriate timing of re-establishment.

13. Provide a detailed description for each of the following:

    a. The biosolids spreader vehicles and the specifications of each vehicle.

    Liquid:

    One-to-two high-flotation land application vehicles or pull-tanks with 2,000 to 6,000 gallon capacity. The number will vary depending on the configuration of land application sites as it affects application time efficiency.

    Cake - Agriculture:

    One-to-two cake spreaders with 10-25 wet tons' capacity. The number will vary depending on the configuration of the land application sites as it affects application time efficiency. The cake spreader boxes will either be a type which can be pulled behind a farm tractor or the box will be mounted on the frame of a high-flotation land application vehicle.

    Cake – Silviculture:

    Tractor, Crawler or Skidder-type unit (with chassis mounted spreader box).

    b. Procedures for calibrating each spreader based on the solids content of various biosolids to ensure uniform distribution and appropriate loading rates on a day-to-day basis.

    Cake Biosolids

    Load Area Method

    1. ***With a known weight of biosolids on the truck.***
    2. ***Spread the entire amount of biosolids on the truck, and make at least one overlapping pass.***
    3. ***Measure the width and length of the area spread.***
        a. ***IF area is not a rectangle, divide the area into 2 rectangles:***

}----------length----------[

Width Rectangle #1

Width Rectangle #2

}----------length----------[

4. ***Calculate the area spread***

    <u>Width X length</u> = acre

43560

a. *If area was not a rectangle:*

(rectangle #1) + (rectangle #2)

(width x length) + (width x length) = acre
43560

5. *Calculate the application rate (wet tons/acre)*

$$\frac{1}{\text{Measured area (acre)}} = \frac{X}{\text{Known weight of truck (wet tons)}}$$

Example:

A. Width = 34 feet

B. Length = 963 feet

c. Permitted rate = 9.4 dry/acre29% solids

D. Area Spread:

$$\frac{34 \times 963}{43{,}560 \text{ sq ft}} = \frac{32{,}742}{43{,}560} = 0.7516 \text{ acres}$$

$$\frac{1}{0.7516 \text{ acre}} = \frac{X}{\text{known weight of truck}}$$

$$\frac{1}{0.7516 \text{ acre}} = \frac{X}{23.27 \text{ wet tons}}$$

0.7516 X 23.27
X 23.27
0.7516
X = 30.96 wet tons/acre

To convert wet tons/acre to dry tons/acre

Wet tons/acre X % solids = dry tons/acre
Example: 29% solids
30.96 wet tons/acre
30.96 X .29 = 8.97 dry tons/acre

Liquid

Load area (subsurface injection or spraying on surface)

1. *Use the same method for cake solids. If weight of biosolids in truck is unknown, convert the number of gallons to dry tons with the following formula:*

Dry tons – (thousands of gallons)

(% solids as a whole number)(0.0425)

Example: 6500 gallons, 8.1% solids

(6.5) (8.10) (0.0425) = 2.23 dry tons

Convert dry tons to wet tons

$$\text{Wet tons} = \frac{\text{dry tons}}{\% \text{ solids}}$$

$$\text{Wet tons} = \frac{2.23}{0.81}$$

$$\text{Wet tons} = 27$$

c. Procedures used to ensure that operations address the following constraints:

(1) Application of biosolids to frozen ground, pasture or hay fields, crops for direct human consumption and saturated or ice/snow covered ground; and

- Pasture and hay fields shall be grazed or clipped to an approximate height of six inches prior to biosolids application.

- Food crops with harvested parts that touch the biosolids/soil mixture and are not totally above the land surface shall not be harvested for 14 months following biosolids application. Food crops which are totally below the surface of the land shall not be harvested for 20 months and 38 months when biosolids remains on the surface for more than 4 months and less than 4 months, respectively.

-Biosolids may only be applied to snow covered ground if snow cover does not exceed an average depth of one inch and the snow and biosolids are incorporated within 24-hours. If snow melts during application, incorporation is not necessary.

(2) Establishment of setback distances, slopes, prohibited access for beef and dairy animals, soil pH requirements, and proper site specific biosolids loading rates on a field-by-field basis.

The following Buffer zones will be observed as follows:

a. Improved Roadways: 25 feet

b. Occupied dwellings: 200 feet (Unless reduced by affected Landowner) "Landowner Waiver of Buffer Zone" form will be used for obtaining landowner's permission to reduce this buffer requirement.

c. Rock outcrops: 25 feet

d. Open sinkholes: 100 feet

e. ***Limestone rock outcrop & closed sinkholes: 50 ft***

f. ***Water Supply wells or springs: 100 feet.***

g. ***Perennial Streams/other surface waters: 100 feet unless there is a permanent vegetative buffer then 35 feet.***

h. ***All segments of streams and tributaries designated as public water supply under the water quality standards: 100 feet***

i. ***Agricultural drainage ditches: 10 feet***

Buffer zones will be flagged and no biosolids will be applied within the buffer zones. The most restrictive buffer will apply in combined situations. Buffer zones will be measured in the field by use of a range-finder or measuring wheel.

- Biosolids shall not be applied to site slopes exceeding 15 %. This restriction may be waived by the department of the establishment and maintenance of perennial vegetation or based on site specific criteria and BMPs in place in the field. Slope percentage will be measured by use of a clinometer.

14. Provide a Land Applier Odor Control Plan that includes at a minimum:

    a. Methods used to identify and abate malodorous biosolids in the field prior to land application, and

    See Attached Odor Control Plan

    b. Methods used to abate malodorous biosolids if land applied.

    See Attached Odor Control Plan

Land Application Sites

15. Provide the DEQ control number, if previously assigned, identifying each land application field. If a DEQ control number has not been assigned, provide the site identification code used by the permit applicant to report activities and the site's location.

    See Attachment A

16. Provide the latitude and longitude of each land application site in decimal degrees to three decimal places and the method of determination.

    See Attachment A

17. Provide a properly completed Biosolids Application Agreement for each land owner, Part D-VI.

    See site specific permit books.

18. Provide a legible topographic map and aerial photograph, including legend, of proposed

application areas to scale as needed to depict the following features:

a. Property boundaries;
b. Surface water courses, including drainage ways;
c. Water supply wells and springs;
d. Roadways;
e. Rock outcrops;
f. Slopes;
g. Sinkholes
h. Frequently flooded areas (National Resources Conservation Service (NRCS) designation);
i. Occupied dwellings within 400 feet of the property boundaries and all existing dwelling and property line setback distances;
j. Publicly accessible properties and occupied buildings within 400 feet of the property boundaries and the associated extended setback distances; and
k. The gross acreage of the fields where biosolids will be applied;

See site specific permit books.

19. Provide a county map or other map of sufficient detail to show general location of the site and proposed transport vehicle haul routes to be utilized from the treatment plant or storage facility.

See site specific permit books.

20. Provide county tax maps labeled with Tax Parcel ID(s)] for each farm to be included in the permit, which may include multiple fields to depict properties within 400 feet of the field boundaries.

See site specific permit books.

21. Provide a USDA soil survey map, if available, of proposed sites for land application of biosolids.

See site specific permit books.

22. Provide the name, mailing address, and telephone number of each site owner, if different from the applicant;

See site specific permit books.

23. Provide the name, mailing address, and telephone number of the person who applies biosolids to the site, if different from the applicant.

See site specific permit books.

24. Provide information as to whether the site is agricultural land, forest, a public contact site, or a reclamation site, as such site types are defined in 9VAC25-32-10.

See site specific permit books.

25. Provide a description of agricultural practices including a list of proposed crops to be grown.

Updated NMP will be available prior to land application.

26. Provide the following information for each land application site that has been identified at the time of permit application, if the applicant intends to apply bulk biosolids subject to the

cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the site:

(a) Whether the applicant has contacted VA DEQ to ascertain whether bulk biosolids subject to 9VAC25-32-356 Table 3 has been applied to the site on or since July 20, 1993, and if so, the name of person contacted; and

(b) Identification of facilities other than the applicant's facility that have sent, or are sending, biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the site since July 20, 1993, if, based on the inquiry in item (a) above, bulk biosolids subject to cumulative pollutant loading rates in 9VAC25-32-356 Table 3 has been applied to the site since July 20, 1993.

To Synagro's knowledge all biosolids applied meet Table 3. However it is a routine for Synagro to track pollutant loading rates through our RMS monitoring system in case any applied sources do not meet these regulations.

27. Provide a nutrient management plan approved by the Department of Conservation and Recreation and a copy of the DCR approval letter for application sites meeting the following conditions:

(a) Sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;
(b) Sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed;
(c) Mined or disturbed land sites where land application is proposed at greater than agronomic rates; or
(d) Other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters.

N/A

28. For mined or disturbed sites where land application is proposed at greater than agronomic rates, provide a reclamation plan that establishes the biosolids application rates and other site specific management practices.

N/A

ATTACHMENT C
SYNAGRO CENTRAL, LCC
GOOCHLAND COUNTY
VPA Biosolids Source List

Facility Name	Permit Number	Location	Treatment Type
Alexandria ASA Advanced WWTP	VA0025160	Alexandria, VA	Class A
Amelia Courthouse San Dist. STP	VA0086681	Amelia, VA	Anaerobic Digestion
Annapolis WRF	MD0021814	Anne Arundel, MD	Lime Stabilization
Arlington County Water Pollution Control Facility	VA0025143	Arlington, VA	Lime Stabilization
Atlantic STP	VA0081248	Virginia Beach, VA	Anaerobic Digestion
Ballenger Creek WWTP	MD0021822	Frederick, MD	Lime Stabilization
Blue Plains Advanced WWTP	DC0021199	Washington, DC	Lime Stabilization
Broad Run WRF	VA0091383	Ashburn, VA	Anaerobic Digestion
Broadneck WRF	MD0021644	Anne Arundel, MD	Lime Stabilization
Broadwater WRF	MD0024350	Anne Arundel, MD	Lime Stabilization
Cox Creek WRF	MD0021661	Anne Arundel, MD	Lime Stabilization
Damascus WWTP	MD0020982	Damascus, MD	Lime Stabilization
Dutoy Creek WWTP	VA0090727	Powhatan, VA	Aerobic Digestion
Falling Creek WWTP	VA0024996	Chesterfield, VA	Anaerobic Digestion
Fighting Creek WWTF	VA0089206	Powhatan, VA	Aerobic Digestion
Frederick City WWTP	MD0021610	Frederick, MD	Anaerobic Digestion
Fredericksburg WWTF	VA0025127	Fredericksburg, VA	Lime Stabilization
Little Falls Run WWTF	VA0076392	Stafford, VA	Aerobic Digestion
Little Patuxent Water Reclamation Plant	MD0055174	Howard Co, MD	Class A
Marley-Taylor WWTP	MD0021679	Lexington Park, MD	Anaerobic Digestion
Maryland City WRF	MD0062596	Anne Arundel, MD	Lime Stabilization
Mattawoman WWTP	MD0021865	Charles Co., MD	Lime Stabilization
Parkway WWTP	MD0021725	Laurel, MD	Lime Stabilization
Patapsco WWTP	MD0021601	Baltimore, MD	Class A pellets
Patuxent WRF	MD0021652	Anne Arundel, MD	Lime Stabilization
Philadelphia Biosolids Recycling Center	not a WWTP	Philadelphia, PA	Class A pellets
Piscataway WWTP	MD0021539	Indian Head, MD	Lime Stabilization
Proctors Creek WWTP	VA0060194	Chesterfield, VA	Anaerobic Digestion
Seneca WWTP	MD0021491	Montgomery Co., MD	Lime Stabilization
WWTF	VA0025437	Petersburg, VA	Lime Stabilization
Strasburg STP	VA0020311	Strasburg, VA	Lime Stabilization
Upper Occuquoan Service Authority	VA0024988	Centreville, VA	Lime Stabilization
US Army Ft A.P. Hill (Wilcox)	VA0032034	Ft. A.P. Hill, VA	Anaerobic Digestion
Warrenton STP	VA0021172	Warrenton, VA	Anaerobic Digestion

PUBLIC NOTICE BILLING INFORMATION

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in _____ in accordance with 9 VAC 25-32-140.A.

Agent/Department to be billed: D. Steve McMahon

Owner: Synagro Central, LLC

Agent/Department Address: 10647 Tidewater Trail

Champlain, Virginia 22438-2017

Agent's Telephone No.: 804-443-2170

Printed Name: D. Steve McMahon

Authorizing Agent - Signature: D. Steve McMahon

Date: 8/28/14

VPA Permit No. _____

Odor Control Plan – Land Applier

Permittee Name Synagro Central, LLC VPA Permit Number_____

Contact Name: D . Steve McMahon
Phone Number: 804-443-2170
Email address: smcmahon@synagro.com

"Malodor" means an unusually strong or offensive odor associated with biosolids or sewage sludge as distinguished from odors commonly associated with biosolids or sewage sludge.

1) Identify methods to identify malodor after delivery to a land application site:

Check all that apply:

√ Comparison of odors from each truck load to identify loads with unusually strong or offensive odor

√ pH analysis – When pH meter is available

☐ Odor measurement device (e.g. Nasal Ranger)

√ Other: unusual color characteristics of material.

2) Identify methods to abate malodor after delivery to a land application site:

Check all that apply:

√ Removal to a landfill

√ Removal and transport to a more secluded site (after verification VAR option was achieved)

☐ Other: _____

3) Identify methods to abate malodor after biosolids are land applied:

√ Incorporation if site management will allow

☐ Other: _____

4) Identify procedures for reporting odor complaints or determination of malodor to the generator. *(Refer to contacts on Generator OCP, any agreements you have with generators regarding handling of odor complaints, etc.)* Certified Land Applicator will notify Synagro's Operations or Technical Services Manager; one of which will notify DEQ and the generator(s) of the nature of the complaint. If the certified land applicator observes a malodorous load(s) in the field, Synagro staff will verify with the generator that treatment standards were met for all material delivered. If it is determined the material did not meet pathogen reduction, the material will be either sent back to WWTP for further treatment or hauled to an approved landfill for disposal. If treatment standards are met and malodors are present, the certified land applicator will evaluate other options such as but not limited to land application on to a more isolated site, incorporation, the addition of lime or other odor reduction agents, or landfill of material.

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
PERMIT APPLICATION FEE FORM
REVISED EFFECTIVE JANUARY 1, 2008

INSTRUCTIONS

Applicants for individual Virginia Pollutant Discharge Elimination System (VPDES), Virginia Pollution Abatement (VPA), Virginia Water Protection (VWP), Surface Water Withdrawal (SWW), and Ground Water Withdrawal (GWW) Permits are required to pay permit application fees, except farming operations engaged in production for market. Fees are also required for registration for coverage under General Permits except for the general permits for sewage treatment systems with discharges of 1,000 gallons per day (GPD) or less and for Corrective Action Plans for leaking underground storage tanks. Except for VWP permits, fees must be paid when applications for permit issuance, reissuance* or modification are submitted. Applicants for VWP permits will be notified by the DEQ of the fee due. Applications will be considered incomplete if the proper fee is not paid and will not be processed until the fee is received. (* - the reissuance fee does not apply to VPDES and VPA permits - see the fee schedule included with this form for details.)

The permit fee schedule is included with this form. Fees for permit issuance or reissuance and for permit modification are included. Once you have determined the fee for the type of application you are submitting, complete this form. The original copy of the form and your check or money order payable to "Treasurer of Virginia" should be mailed to:

Department of Environmental Quality
Receipts Control
P.O. Box 1104
Richmond, VA 23218

A copy of the form and a copy of your check or money order should accompany the permit application. You should retain a copy for your records. Please direct any questions regarding this form or fee payment to the DEQ Office to which you are submitting your application.

APPLICANT NAME: SYNAGRO CENTRAL, LLC **SSN/FIN:** 76-0612568

ADDRESS: 10647 Tidewater Trail **DAYTIME PHONE:** (804) 443-2170
Area Code

Champlain, Virginia 22438-2017

FACILITY/ACTIVITY NAME: SAME AS ABOVE

LOCATION: Goochland County

TYPE OF PERMIT APPLIED FOR
(from Fee Schedule): LAND APPLICATION

TYPE OF ACTION: X **New Issuance** _____ **Reissuance** _____ **Modification**

AMOUNT OF FEE SUBMITTED
(from Fee Schedule): $5,000.00

EXISTING PERMIT NUMBER (if applicable): VDHBUR 96

DEQ OFFICE TO WHICH APPLICATION SUBMITTED (check one)

O Abingdon/SWRO	O Harrisonburg/VRO	O Woodbridge/NVRO	O Lynchburg/SCRO
X Richmond/PRO	O Richmond/Headquarters	O Roanoke/WCRO	O Virginia Beach/TRO

FOR DEQ USE ONLY
Date: _____
DC #: _____

Original Form and Check - DEQ Receipts Control, Richmond
Copy of Form and Copy of Check - DEQ Regional Office or Permit Program Office

FEE SCHEDULES

A. VPDES and VPA Permits. Applications for issuance of new individual VPDES or VPA permits, and for permittee initiated major modifications that occur (and become effective) before the stated permit expiration date. (Flows listed are facility "design" flows. Land application rates listed are facility "design" rates.) [NOTE: VPDES and VPA permittees pay an Annual Permit Maintenance Fee instead of a reapplication fee. The permittee is billed separately by DEQ for the Annual Permit Maintenance Fee.]

TYPE OF PERMIT	ISSUANCE	MODIFICATION	LAND APP MOD*
VPDES Industrial Major	$24,000	$12,000	
VPDES Municipal Major	$21,300	$10,650	$1,000
~~VPDES Municipal Major Stormwater / MS4~~ *These permits are now issued by DCR.*	~~$21,300~~	~~$10,650~~	
VPDES Industrial Minor / No Standard Limits	$10,200	$5,150	
VPDES Industrial Minor / Standard Limits	$3,300	$3,300	
VPDES Industrial Stormwater	$7,200	$3,600	
VPDES Municipal Minor / Greater Than 100,000 GPD	$7,500	$3,750	$1,000
VPDES Municipal Minor / 10,001 GPD - 100,000 GPD	$6,000	$3,000	$1,000
VPDES Municipal Minor / 1,001 GPD - 10,000 GPD	$5,400	$2,700	$1,000
VPDES Municipal Minor / 1,000 GPD or Less	$2,000	$1,000	
VPDES Municipal Minor / 1,000 GPD or Less that includes authorization for land application or land disposal of sewage sludge	$5,000	$1,000	$1,000
~~VPDES Municipal Minor Stormwater / MS4~~ *These permits are now issued by DCR.*	~~$2,000~~	~~$1,000~~	
VPA Industrial Wastewater Operation / Land Application of 10 or More Inches Per Year	$15,000	$7,500	
VPA Industrial Wastewater Operation / Land Application of Less Than 10 Inches Per Year	$10,500	$5,250	
VPA Industrial Sludge Operation	$7,500	$3,750	
VPA Municipal Wastewater Operation	$13,500	$6,750	
VPA Municipal Sludge Operation	$5,000	$1,000	
All other VPA operations not specified above	$750	$375	

* The fee for modification of a VPDES permit due to changes relating to authorization for land application or land disposal of sewage sludge shall be $1,000.

B. Virginia Water Protection (VWP) Permits. Applications for issuance of new individual, and reissuance or major modification of existing individual VWP permits. Only one permit application fee will be assessed per application; for a permit application involving more than one of the operations described below, the governing fee shall be based upon the primary purpose of the proposed activity. (Withdrawal amounts shown are maximum daily withdrawals.)

TYPE OF PERMIT	ISSUANCE/REISSUANCE	MODIFICATION
VWP Individual / Surface Water Impacts (Wetlands, Streams and/or Open Water)	$2,400 plus $220 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($60,000 maximum)	$1,200 plus $110 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($30,000 maximum)
VWP Individual / Minimum Instream Flow - Withdrawals equal to or greater than 3,000,000 gallons on any day	$25,000	$5,000
VWP Individual / Minimum Instream Flow - Withdrawals between 2,000,000 and 2,999,999 gallons on any day	$20,000	$5,000
VWP Individual / Minimum Instream Flow - Withdrawals between 1,000,000 and 1,999,999 gallons on any day	$15,000	$5,000
VWP Individual / Minimum Instream Flow - Withdrawals < 1,000,000 gallons on any day that do not otherwise qualify for a general VWP permit for water withdrawals	$10,000	$5,000
VWP Individual / Reservoir - Major	$35,000	$12,500
VWP Individual / Reservoir - Minor	$25,000	$12,500
VWP Individual/Nonmetallic Mineral Mining	$2,400 plus $220 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($7,500 maximum)	$1,200 plus $110 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($3,750 maximum)

C. Surface Water Withdrawal (SWW) and Ground Water Withdrawal (GWW) Permits. Applications for issuance of new individual, and reissuance or major modification of existing individual SWW permits or GWW permits.

TYPE OF PERMIT	ISSUANCE/REISSUANCE	MODIFICATION
Surface Water Withdrawal	$12,000	$6,000
Ground Water Withdrawal / Initial Permit for an Existing Withdrawal Based Solely on Historic Withdrawals	$1,200	$600
Ground Water Withdrawal	$6,000	$3,000

D. Registration Statements (VPDES and VPA permits) or Applications (VWP permits) for General Permit Coverage.

1. Except as specified in 2, 3, 4 and 5 below, the fee for registration for coverage under a general permit is $600.
2. General VPDES Permit for Domestic Sewage Discharges of Less Than or Equal to 1,000 GPD (9 VAC 25-110) = $0.
   General VPDES Permit Regulation for Discharges From Petroleum Contaminated Sites (9 VAC 25-120) = $0.
3. **VWP General Permit:**

TYPE OF PERMIT	ISSUANCE
VWP General / Less Than 4,356 sq. ft. (1/10 acre) of Surface Water Impact (Wetlands, Streams and/or Open Water)	$0
VWP General / 4,356 sq. ft. to 21,780 sq. ft. (1/10 acre to 1/2 acre) of Surface Water Impact (Wetlands, Streams and/or Open Water)	$600
VWP General / 21,781 sq. ft. to 43,560 sq. ft. (greater than 1/2 acre to one acre) of Surface Water Impact (Wetlands, Streams and/or Open Water)	$1,200
VWP General / 43,561 sq. ft. to 87,120 sq. ft. (greater than one acre to two acres) of Surface Water Impact (Wetlands, Streams and/or Open Water)	$1,200 plus $120 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 43,560 sq. ft. (one acre) ($2,400 maximum)
VWP General / Minimum Instream Flow / Reservoir - Water withdrawals and/or pond construction	$2,400

4. **VPDES Storm Water General Permits (except as specified in 5 below):**

TYPE OF PERMIT	ISSUANCE
VPDES General / Industrial Storm Water Management	$500
~~VPDES General / Storm Water Management - Phase I Land Clearing ("Large" Construction Activity - Sites or common plans of development equal to or greater than 5 acres)~~ *These permits are now issued by DCR.*	~~$500~~
~~VPDES General / Storm Water Management - Phase II Land Clearing ("Small" Construction Activity - Sites or common plans of development less than 5 Acres)~~ *These permits are now issued by DCR.*	~~$300~~

5. Owners of facilities that are covered under the Industrial Activity (VAR5) ~~and Construction Site (VAR10)~~ storm water general permits that expire on June 30, 2004, and who are reapplying for coverage under the new general permits that are effective on July 1, 2004, must submit a fee of $600 to reapply.